REMARKS

I. Status of Claims

Claims 1 -20 are pending.

II. New Corrected Drawings

The examiner required new corrected drawings because of numerous hand notations on the original drawings. New corrected drawings comprising Figures 1-4 are included herewith.

III. Claim rejections Pursuant to 35 USC § 102

The Action rejected claims 1, 2, 13 and 14 as being anticipated by Cathers et al, (US Patent 5,511,092). Claim 1, as currently amended requires a correlator circuit block that detects incorrect convergence by <u>summing a plurality of consecutive alternate mark inversion symbols.</u>

Cathers et al. neither discloses nor suggests these features. Cathers teaches a correlator (Fig. 1, 102-103) that detects errors in "framing, cell delineation and/or a variety of error correction schemes, such as parity, cyclic redundancy checksums, etc." Cathers, column 3, line 62- column 4, line 1. Cathers does not disclose error detection of code based on alternate mark inversion symbols, nor does it disclose the summing of consecutive symbols as an error detection scheme. Rather, Cathers suggests error detection schemes that are frame-based.

Applicant respectfully submits that the rejection of claim 1 has been overcome and requests that the rejection of claim 1 be withdrawn, and amended claim 1 allowed.

The Action rejected claim 2 "with the addition of Cathers teaching a correlator circuit block with a means for calculating the correlation function of the equalizer output." Claim 2 should be allowable for at least the same reasons as amended claim 1. In addition, Claim 2 requires an <u>autocorrelator</u> function. The correlator 102, 103 and 301, 303 of Cathers is not an autocorrelator function. Because Cathers does not teach an autocorrelator function and because

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of the amendment to claim 1 on which claim 2 depends, the examiner's rejection of claim 2 has been overcome, and claim 2 be should be allowed.

Claim 13 should be allowable for at least the same reasons as claim 1. Claim 13 as currently amended requires a correlator circuit block that detects "detect[s] an incorrect convergence of the blind adaptive equalizer, based on <u>summing a plurality of consecutive alternate mark inversion symbols at</u> the equalizer output signal."

Cathers et al. neither discloses nor suggests these features. Cathers teaches a correlator (Fig. 1, 102-103) that detects errors in "framing, cell delineation and/or a variety of error correction schemes, such as parity, cyclic redundancy checksums, etc." Cathers, column 3, line 62-column 4, line 1. Because Cathers does not disclose error detection of code based on alternate mark inversion symbols, nor does it disclose the summing of consecutive symbols as an error detection scheme, rather Cathers discloses error correction schemes that are frame-based, the applicant submits that the rejection of claim 13 has been overcome, and the applicant requests that the claim be allowed.

Claim 14 should be allowable for at least the same reasons as claim 13 and for the same reasons as claim 2. Applicant respectfully requests that claim 14 be allowed.

IV. Rejection pursuant to 35 USC §103

Claim 9 was rejected as being unpatentable over Cathers in view of Limberg (US Patent 5,901,175). Claim 9 requires that "the corrector filter include[] an infinite impulse response filter." Limberg was cited for teaching "the use of an IIR filter (See Summary of Invention) and discloses that this equalizer would be suitable for use in a telephony application." However, Limberg fails to cure the deficiency of Cathers et al. with respect to the features of claim 1, as discussed above. Limberg, merely teaches the use of an IIR filter as "a weighting signal generator" (column 8, lines 50-53) not as a corrector filter that applies a correction based on a correlator output. Thus it would not have been obvious to use an IIR filter as described in Limberg in the application circuit of claim 9.

Because claim 9 fails to cure the deficiency of Cathers et al. with respect to the requirements of base claim 1, and because the use of an IIR filter as described in claim 9 would not have been obvious to one of skill in the art, the applicant respectfully requests that the objections to claim 9 be withdrawn and claim 9 allowed.

V. Allowable Subject Matter

The examiner has objected to claims 3-8, 10-12 and 15-20 as being dependent on a rejected base claim, but noted that they would be allowable if rewritten in independent form including all of the limitations of the base claim and intervening claims.

Claim 3 has been amended to independent form to include the limitations of original claims 1 and 2 from which it depended. Claim 15 has been amended to independent form to include the limitations of original claims 13 and 14 from which it depended. As such, the applicant requests that claims 3 and 15 and claims 4, 5, 16 and 17, which depend from those claims be allowed.

The examiner noted that the NPL reference, Barbosa, et al. "appear[s] to teach equations that are very similar in form to the applicant's claims." Upon careful review, the applicant submits that Barbosa is not material to the patentability of the present claims.

With respect to claims 6, 7, and 8, which depend from claims 1 and 2, because the applicant has overcome the rejection of claims 1 and 2, the applicant requests that these claims be allowed in their original form.

With respect to claims 10, 11 and 12, which depend from claims 1 and 9, because the applicant has overcome the rejection of claims 1 and 9, the applicant requests that these claims be allowed in their original form.

With respect to claims 18, 19 and 20, which depend from claims 13 and 14, because the applicant has overcome the rejection of claims 13 and 14, the applicant requests that these claims be allowed in their original form.
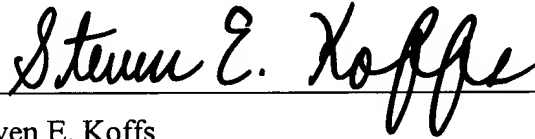
VIII. Conclusion

Having addressed the examiner's rejections, applicant submits that the reasons for the examiner's rejections have been overcome by the amended claims and remarks made herein, and the rejections can no longer be sustained. Applicant respectfully requests reconsideration and withdrawal of the rejections and that a Notice of Allowance be issued.

Should any unresolved issues remain, the examiner is requested to call Applicant's attorney at the telephone number below.

The Commissioner for Patents is hereby authorized to charge any fees or credit any excess payment that may be associated with this communication to Duane Morris LLP deposit account 50-2061.

Respectfully submitted,

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